Application No. 09/941,711
Request for Reconsideration dated February 27, 2006
Submitted with RCE in response to Final Office Action dated September 27, 2005

This listing of claims will replace all prior versions, and listings, of claims in the application:

<u>Listing of Claims:</u>

Claim 1 (Previously Presented): An image data generating apparatus comprising:

an image data generating mechanism configured to generate image data;

an image process control information obtaining mechanism configured to obtain image process control information that designates image process conditions for the generated image data at an output apparatus, wherein the image process control information is determined according to a combination of an image generating characteristic of said image data generating apparatus and reproduction characteristics of the output apparatus; and

an output mechanism configured to output the generated image data associated with the obtained image process control information.

Claim 2 (Previously Presented): The image data generating apparatus of claim 1, wherein:

the image process control information and the generated image data are contained in one output file.

Claim 3 (Previously Presented): The image data generating apparatus of Claim 2, wherein:

said output file is an Exlf file.

Claim 4 (Previously Presented): The image data generating apparatus of Claim 3, wherein:

the image process control information is stored at a Makernote portion of the Exlf file.

Claim 5 (Previously Presented): The image data generating apparatus of Claim 1, wherein:

the image process control information contains information for controlling the reproduction characteristics of the image data output apparatus.

Claim 6 (Previously Presented): The image data generating apparatus of Claim 5, wherein:

the image process control information includes gamma correction information.

Claim 7 (Previously Presented): The image data generating apparatus of Claim 6, wherein:

said image process control information further comprises additional information that is correlated to said image data, said additional information including at least one of color space information, contrast information, color balance information, sharpness information,

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color correction information, shadow point information, highlight point information, brightness correction information, and highlight color information.

Claim 8 (Previously Presented): The image data generating apparatus of Claim 1, further comprising:

an optional image process condition obtaining mechanism configured to obtain an optional image process condition set by user;

an image control information adding mechanism configured to add the obtained optional image process condition to the image process control information; and

wherein the image process control information obtaining mechanism obtains the image process control information to which the optional image process condition is added.

Claim 9 (Previously Presented): The image data generating apparatus of Claim 1, further comprising:

a storage mechanism that is configured to hold therein the image process control information, wherein

said image process control information obtaining mechanism is configured to obtain said image process control information from said storage mechanism.

Claim 10 (Previously Presented): The image data generating apparatus of claim 1, further comprising:

a data transfer mechanism configured to transmit the image data and the image process control information.

Claim 11 (Previously Presented): The image data generating apparatus of claim 1, wherein:

the image data generating apparatus is at least one of a digital still camera, a digital video camera, and a scanning device.

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Claim 12 (Previously Presented): An image data generating apparatus comprising:

an image data generating mechanism configured to generate image data of a subject;

a first obtaining mechanism configured to obtain first information reflecting image generating characteristics of the image data generating mechanism, the first information being used in color conversion to an absolute color space;

a second obtaining mechanism configured to obtain second information reflecting reproduction characteristics of an output apparatus that outputs an image according to image data that is input from the image data generating mechanism, the second information designates an optional image quality adjustment process to image data that is output to the output apparatus; and

an output mechanism configured to output the generated image data associated with image process control information including at least one of the first information and the second information.

Claim 13 (Previously Presented): The image data generating apparatus of Claim 12, wherein:

the image data, the first information and the second information are contained in one image file.

Claim 14 (Original): The image data generating apparatus of Claim 12, wherein:

the first information includes at least one of gamma correction information, color space information, and negative image data value information.

Claim 15 (Original): The image data generating apparatus of Claim 12, wherein:

the second information includes at least one of an image correction characteristic associated with generating a print data from an image data.

Claim 16 (Original): The image data generating apparatus of Claim 15, wherein:

the second information includes at least one of contrast information, color balance information, sharpness information, stored color correction information, shadow point information, highlight point information, saturation information, and brightness correction information.

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Claim 17 (Previously Presented): The image data generating apparatus of Claim 12, wherein:

the image data generating apparatus is at least one of a digital still camera, a digital video camera, and a scanning device.

Claim 18 (Previously Presented): An image data generating apparatus, comprising:

means for generating image data;

means for obtaining image process control information that designates image process conditions for the generated image data at an output apparatus, wherein the image process control information is determined according to a combination of an image generating characteristic of said means for generating image data and reproduction characteristics of the output apparatus; and

means for generating an output containing the generated image data and the image process control information.

Claim 19 (Previously Presented): The image data generating apparatus of Claim 18, wherein:

each of said means for generating image data, means for obtaining image process control information, and means for generating an output is a computer program product having computer readable instructions.

Claim 20 (Previously Presented): The image data generating apparatus of Claim 19, wherein:

the image process control information and the generated image data are contained in one output file.

Claim 21 (Previously Presented): The image data generating apparatus of Claim 18, wherein:

the image process control information includes gamma correction information.

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Claim 22 (Previously Presented): An image data generating apparatus comprising:

means for generating image data of a subject;

means for obtaining first information reflecting image generating characteristics of the means for generating image data, the first information being used in color conversion to an absolute color space;

means for obtaining second information reflecting reproduction characteristics of an output apparatus that outputs an image according to image data that is input from the means for generating image data, the second information designates an optional image quality adjustment process to image data that is output to the output apparatus; and

means for outputting the generated image data associated with image process control information including at least one of the first information and the second information.

Claim 23 (Previously Presented): The image data generating apparatus of Claim 22, wherein:

said means for outputting the generated image data includes means for including the image data, the first information and the second information in one output file.

Claim 24 (Original): The image data generating apparatus of Claim 22, wherein:

the first information includes at least one of gamma correction formation, color space information, and negative image data value information.

Claim 25 (Original): The image data generating apparatus of Claim 22, wherein:

the second information includes at least one of contrast information, color balance information, sharpness information, stored color correction information, shadow point information, highlight point information, saturation information, and brightness correction information.

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Claim 26 (Previously Presented): A method for generating an image data, comprising steps of:

generating image data;

obtaining image process control information that designates image process conditions for the generated image data at an output apparatus, wherein the image process control information is determined according to a combination of an image generating characteristic of an image data generating apparatus and reproduction characteristics of the output apparatus; and

generating an output containing the generated image data associated with the obtained image process control information.

Claim 27 (Previously Presented): The method of Claim 26, wherein:

said steps of generating image data, obtaining image process control information, and generating an output are computer-implemented process steps.

Claim 28 (Previously Presented): The method of Claim 27, further comprising a step of:

including said image process control information and said image data in one output file.

Claim 29 (Previously Presented): The method of Claim 26, wherein:

the image process control information includes gamma correction information.

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Claim 30 (Previously Presented): A method for generating an image data, comprising steps of:

generating image data of a subject;

obtaining first information reflecting image generating characteristics of an image data generating apparatus, the first information being used in color conversion to an absolute color space;

obtaining second information reflecting reproduction characteristics of an output apparatus that outputs an image according to image data that is input from the image data generating apparatus, the second information designates an optional image quality adjustment process to image data that is output to the output apparatus; and

generating an output containing the generated image data associated with image process control information including at least one of the first information and the second information.

Claim 31 (Previously Presented): The method of Claim 30, wherein:

said step of generating an output includes including the image data, the first information and the second information in one output file.

Claim 32 (Original): The method of Claim 30, wherein:

the first information includes at least one of gamma correction information, color space information, and negative image data value information.

Claim 33 (Original): The method of Claim 30, wherein:

the second information includes at least one of contrast information, color balance information, sharpness information, stored color correction information, shadow point information, highlight point information, saturation information, and brightness correction information.

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Claim 34 (Previously Presented): A propagated data signal for conveying image data and image processing control data that corresponds with a combined use of an image data generating apparatus and an output apparatus, said propagated data signal comprising:

image data containing digital image data of a subject captured from the image data generating apparatus; and

image process control data, said image process control data including a first data segment containing first information reflecting image generating characteristics of the image data generating apparatus, the first information being used in color conversion to an absolute color space, and

a second data segment containing second information reflecting reproduction characteristics of the output apparatus that outputs an image according to image data that is input from the image data generating apparatus, the second information designates an optional image quality adjustment process to image data that is output to the output apparatus.

Claim 35 (Original): The propagated data signal of Claim 34, wherein:

the first information includes at least one of gamma correction information, color space information, and negative image data value information.

Claim 36 (Original): The propagated data signal of Claim 34, wherein:

the second information includes at least one of contrast information, color balance information, sharpness information, stored color correction information, shadow point information, highlight point information, saturation information, and brightness correction information.

Claim 37 (Previously Presented): The propagated data signal of Claim 34, wherein:

said image data and said image process control data are included as part of an Exlf file that is embodied in said propagated data signal.

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Claim 38 (Previously Presented): An image processing apparatus configured to perform image processing on image data, comprising:

a processor; and

a data retrieval mechanism configured to retrieve said image data and image process control data associated with the image data, wherein

the image process control data contains image process control information that designates image process conditions for the retrieved image data at an output apparatus, wherein the image process control information is determined according to a combination of an image generating characteristic of an image data generating apparatus and reproduction characteristics of the output apparatus;

a data providing mechanism configured to provide the image data and the image process control data to the processor; and wherein

said processor is configured to perform image processing on said image data using the image data and the image process control information.

Claim 39 (Previously Presented): The image processing apparatus of Claim 38, wherein:

if the process control data is not retrieved, the data providing mechanism provides the image data and a predetermined image process control data to the processor, and wherein the predetermined image process control data is configured to general purpose image processing.

Claim 40 (Previously Presented): The image processing apparatus of Claim 38, wherein:

said processor is hosted in a computer.

Claim 41 (Previously Presented): The image processing apparatus of Claim 38, wherein the output apparatus is a printer.

Claim 42 (Previously Presented): The image processing apparatus of Claim 38, wherein:

said image process control data and said image data are contained in a single image file.

Claim 43 (Previously Presented): The image processing apparatus of Claim 42, wherein:

the image process control data is stored at a Makernote portion of the ExIf file, and

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the data retrieval mechanism retrieves the Makernote portion to obtain the image process control data.

Claim 44 (Previously Presented): The image processing apparatus of Claim 42, wherein:

the image process control information contains information for controlling the reproduction characteristics of the image data at the output apparatus.

Claim 45 (Previously Presented): The image processing apparatus of Claim 44, wherein:

the image process control information includes gamma correction information.

Claim 46 (Previously Presented): The image processing apparatus of Claim 45, wherein:

said image process control information further comprises additional information that is correlated to said image data, said additional information including at least one of color space information, contrast information, color balance information, sharpness information, color correction information, shadow point information, highlight point information, brightness correction information, and highlight color information.

Claim 47 (Previously Presented): An image processing apparatus configured to perform image processing on image data of a subject, said image data retrieved from an image file, comprising:

a processor;

a data retrieval mechanism configured to retrieve said image file and provide the image file to the processor, said image file including

first information reflecting image generating characteristics of an image data generating apparatus, the first information being used in color conversion to an absolute color space;

second information reflecting reproduction characteristics of an output apparatus that outputs an image according to image data that is input from an image data generating apparatus, the second information designates an optional image quality adjustment process to image data that is output to the output apparatus; wherein

said processor is configured to implement

a first reproduction mechanism configured to perform image processing on said image data with said first information, and

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a second reproduction mechanism configured to perform a reproduction process specified for said image data based on said second information; and

an image data output mechanism configured to output the image data after said image data has been processed by said first reproduction mechanism and said second reproduction mechanism.

Claim 48 (Original): The image processing apparatus of Claim 47, wherein:

the first information includes at least one of gamma correction information, color space information, and negative image data value information.

Claim 49 (Original): The image processing apparatus of Claim 47, wherein:

the second information includes at least one of an image correction characteristic associated with generating a print data from an image data.

Claim 50 (Original): The image processing apparatus of Claim 49, wherein:

the second information includes at least one of contrast information, color balance information, sharpness information, stored color correction information, shadow point information, highlight point information, saturation information, and brightness correction information.

Claim 51 (Original): The image processing apparatus of Claim 47, wherein:

said image processing apparatus includes a printer.

Claim 52 (Previously Presented): An image processing apparatus configured to perform image processing on image data retrieved from an image file, comprising:

a processor; and

means for retrieving said image file and providing the image file to the processor, said image file including

the image data, and

image process control data containing image process control information that designates image process conditions for the retrieved image data at an output apparatus, wherein the image process control information is determined according to a combination of

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an image generating characteristic of an image data generating apparatus and reproduction characteristics of the output apparatus, wherein

said processor includes means for processing said image data using the image data and the image process control information.

Claim 53 (Previously Presented): The image processing apparatus of Claim 52, wherein:

the image file includes said image process control data and said image data in a single file.

Claim 54 (Previously Presented): The image processing apparatus of Claim 53, wherein:

the image process control information includes gamma correction information.

Claim 55 (Previously Presented): An image processing apparatus configured to perform image processing on image data of a subject, said image data retrieved from an image file, comprising:

a processor; and

means for retrieving said image file and providing the image file to the processor, said image file including

first information reflecting image generating characteristics of an image data generating apparatus, the first information being used in color conversion to an absolute color space;

second information reflecting reproduction characteristics of an output apparatus that outputs an image according to image data that is input from an image data generating apparatus, the second information designates an optional image quality adjustment process to image data that is output to the output apparatus, wherein

said processor is configured to implement

means for performing image processing on said image data with said first information, and

means for performing a reproduction process specified for said image data based on said second information; and

means for outputting the image data after said image data has been processed by said means for performing image processing and said means for performing a reproduction process.

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Claim 56 (Original): The image processing apparatus of Claim 55, wherein:

the first information includes at least one of gamma correction information, color space information, and negative image data value information.

Claim 57 (Previously Presented): A method for processing image data, comprising steps of:

retrieving said image data and image process control information from an external source;

providing the image data and the image process control information to the processor, wherein

the image process control information designates image process conditions for the retrieved image data at an output apparatus, and wherein the image process control information is determined according to a combination of an image generating characteristic of an image generating apparatus and reproduction characteristics of the output apparatus; and

processing said image data using the image data and the image process control information.

Claim 58 (Previously Presented): The method of Claim 57, wherein:

said image process control information and said image data are included in a single image file.

Claim 59 (Previously Presented): The method of Claim 57, wherein:

the processing step includes processing of the image data at the output apparatus.

Claim 60 (Previously Presented): The method of Claim 59, wherein:

the image process control information includes gamma correction information.

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Claim 61 (Previously Presented): A propagated data signal for conveying image data and image processing control data that corresponds with a combination of an image data generating apparatus and an output apparatus, said propagated signal comprising:

an image segment containing the image data to be image processed;

an image processing control segment containing the image processing control data for controlling the output apparatus to perform image processing on said image data using the image data and the image processing control data, and wherein the image processing control data includes image process control information that designates image process conditions for the image data at the output apparatus, and wherein the image process control information is determined according to a combination of an image generating characteristic of the image data generating apparatus and reproduction characteristics of the output apparatus.

Claim 62 (Previously Presented): A computer program product, comprising:

a computer storage medium; and

a computer program code stored in the computer storage medium for implementing an image processing on a computer, the computer program code having

a first computer code configured to retrieve image data and image process control data associated with the image data, wherein the image process control data contains image process control information that designates image process conditions for the image data at an output apparatus, and wherein the image process control information is determined according to a combination of an image generating characteristic of an image data generating apparatus and reproduction characteristics of the output apparatus,

a second computer code configured to perform image processing on the image data using the image data and the image process control information, if the image process control data is retrieved.

Claim 63 (Previously Presented): A computer program product of Claim 62, further comprising:

a third computer code configured to perform image data processing on the image data using a predetermined image process control data, if the image process control data is not retrieved, and wherein the predetermined image process control data is configured to general purpose image processing.

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Claim 64 (Previously Presented): An image data processing system, comprising:

an image data generating device configured to generate image data;

an image process control information obtaining mechanism configured to obtain image process control information that designates image process conditions for the generated image data at an output apparatus, wherein the image process control information is determined according to a combination of an image generating characteristic of said image data generating device and reproduction characteristics of the output apparatus;

an output mechanism configured to output the generated image data associated with the obtained image process control information in an output file;

a processor; and

a data retrieval mechanism configured to retrieve said output file and provide the output file to the processor, wherein

said processor is configured to perform image processing on said image data using the image data and the image process control information.

Claim 65 (Original): The system of Claim 64, further comprising:

a personal computer that contains said processor and said data retrieval mechanism.

Claim 66 (Previously Presented): An image data processing system, comprising:

an image data generating apparatus, including

an image data generating mechanism configured to generate image data of a subject and store said image data in an image file,

a first image obtaining mechanism configured to obtain first information reflecting image generating characteristics of the image data generating apparatus, the first information being used in color conversion to an absolute color space,

a second image obtaining mechanism configured to obtain second information reflecting reproduction characteristics of an output apparatus that outputs an image according to image data that is input from the image data generating apparatus, the second information designates an optional image quality adjustment process to image data that is output to the output apparatus; and

an image processing apparatus, including

a processor,

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a data retrieval mechanism configured to retrieve said generated image data, said first information, and second information and provide said generated image data, said first information and said second information to the processor, wherein

said processor is configured to implement

a first reproduction mechanism configured to perform image processing on said image data with said first information, and

a second reproduction mechanism configured to perform a reproduction process specified for said image data based on said second information, and

an image data output mechanism configured to output the image data after said image data has been processed by said first reproduction mechanism and said second reproduction mechanism.

Claim 67 (Previously Presented): An image data processing system, comprising:

means for generating image data;

means for obtaining image process control information that designates image process conditions for the generated image data at an output apparatus, wherein the image process control information is determined according to a combination of an image generating characteristic of said means for generating image data and reproduction characteristics of the output apparatus;

means for generating an image file with image process control data containing the image process control information;

a processor; and

means for retrieving said image file and providing the image file to the processor, said image file including

the image data, and

the image process control data, wherein

said processor includes means for processing said image data using the image process control information.

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Claim 68 (Previously Presented): An image data processing system, comprising:

means for generating an image file, including,

means for generating image data of a subject,

means for obtaining first information reflecting image generating characteristics of the means for generating image data, the first information being used in color conversion to an absolute color space,

means for obtaining second information reflecting reproduction characteristics of an output apparatus that outputs an image according to image data that is input from the means for generating image data, the second information designates an optional image quality adjustment process to image data that is output to the output apparatus, and

means for generating the image file containing the image data and at least one of the first information and the second information; and

an image processing apparatus including,

a processor, and

means for retrieving said image file and providing said image file to the processor, said image file including

the image data, the first information and the second information, wherein said processor includes means for processing said image data using the first information and the second information.

Claim 69 (Previously Presented): An image data generating apparatus comprising:

an image data generating module configured to generate image data of a subject by photoelectric converter;

a storage module configured to store image process control information that is determined according to an output result of the generated image data at an output apparatus, the image process control information designating an image processing condition for image data that is output to the output apparatus;

an image process control information obtaining module configured to obtain the image process control information from the storage module; and

an output module configured to output the generated image data associated with the obtained image process control information.

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Claim 70 (Previously Presented): An image data generating apparatus according to claim 69, wherein the image generating apparatus includes a digital still camera.

Claim 71 (Previously Presented): A digital still camera comprising:

an image data generating module that generates image data;

an image process control information obtaining module that obtains image process control information, wherein the image process control module is determined according to a combination of image generating characteristics of the digital still camera and reproducing characteristics of an output apparatus, wherein the image process control information designates an image processing condition for image data that is output to the output apparatus; and

an output module that outputs the generated image data associated with the obtained image process control information.